

Serial No.: 10/673,989
Examiner: Bastianelli, John
Art Unit: 3751

AMENDMENTS TO THE SPECIFICATION

Please amend paragraph 34 of the specification as follows:

(034) Referring to FIGS. 1, 3 and 4, an exemplary embodiment of a pendulum valve assembly 10 constructed in accordance with the prior art generally includes a housing 12 defining a flow path 14 extending between an inlet 18 and an outlet 20. ~~Valve~~ First and second valve ~~seats 22, 24, or annular surfaces,~~ are provided in the flow path 14 of the housing 12 around edges of the ~~openings 18, 20~~ inlet 18 and the outlet 20, respectively. As shown, the assembly includes a pendulum valve 16 operatively mounted within the housing and having a slide plate 26 which is pivotally movable between a first opened position completely out of the flow path 14, and a second opened position, which is inside the flow path 14, as shown in FIG. 3. The slide plate 26 allows reduced fluid flow through the outlet 20 when in the second opened position inside the flow path 14. The slide plate 26 is further laterally, or axially, movable from the second opened position inside the flow path 14 to a minimum controllable conductance position against the second valve seat 24 of the outlet 20, as shown in FIG. 4, substantially preventing fluid flow through the outlet 20. In this soft closed position the plate 26 may or may not physically contact the second valve seat 24 of the outlet 20, and there may be a small gap, which allows conductance.

Please amend paragraphs 38 and 39 of the specification as follows:

(038) Although not shown, the seal ring 30 has on the first surface 38 remote from the slide plate 26, a plurality of successive, circumferentially arranged bores. The bores are aligned, respectively, with holes formed in the valve seat 22. The holes in the valve seat 22 extend to an annular chamber 52 which coaxially surrounds the flow channel 14. A plurality of fasteners, not shown, extend through the holes of the valve seat 22 and are secured in the corresponding bores of the seal ring 30. An annular piston 54 equipped with o-rings is located in the channel 52 and

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is secured to the fasteners. The chamber 52 includes an inlet conduit so arranged relative to the piston 54 that the fluid, such as compressed air, flowing therethrough acts only on a first side of the piston 54 secured to the fasteners. There are further provided a plurality of springs 58 which act on an opposite side of the annular piston 54 remote from the fasteners (alternatively, two inlet conduits opening into the annular chamber 52 can be provided so that fluid pressure would act on opposite sides of the annular piston 54, to thereby eliminate the springs). An example of such an arrangement, including suitable fasteners, is described in greater detail in U.S. patent application serial number 10/369,952, filed on February 20, 2003, and entitled Seal Ring for Pendulum Valve Assembly, now U.S. Patent No. 6,863,256, which is assigned to the assignee of the present invention and incorporated herein by reference. Another example of such an arrangement, including suitable fasteners, is described in U.S. Patent No. 5,577,707 to Brida, which is entitled Slide Valve, and is incorporated herein by reference.

(039) When the slide plate 26 is pivoted into the flow channel 14, but remains in an opened position as shown in FIG. 3, the seal ring 30 remains positioned against the valve seat 22. In this position of the seal ring 30, a pressure medium flows into the annular chamber 52 so that the annular piston 54 is displaced, against the biasing force of the springs 58 together with the seal ring 30. When the slide plate 26 is in its minimum controllable conductance, or "soft" closed, position against (or very near) the valve seat 24, as shown in FIG. 4, the seal ring 30 remains positioned against the valve seat 22. However, to completely seal the closed slide plate 26, the pressure fluid is evacuated from the annular chamber 52, so that the springs 58 can push the annular piston 54, together with the attached fasteners 60 (not viewable) and the sealing ring 30 against the slide plate 26, which is forced against the valve seat 24 to provide a "hard" closed position. The closed slide plate 26 is completely sealed by the seal ring 30, for example, during cleaning of the process chamber when semiconductor processing is not being conducted.